

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name

Lyon County Utilities Department
P. O. Box 1699
Dayton, Nevada 89403

Permit Number

NEV99012

Location

The Silver Springs Water Reclamation Facility is located at 1900 Eureka Street in Silver Springs, Nevada in Township T18N, Range R25E, Section 19 MDB&M. Latitude: 39E25'00"N, Longitude: 119E12'30"W.

General

The Silver Springs Water Reclamation Facility (SSWRF) is designed to provide Tertiary treatment with biological nutrient removal of domestic wastewater originating from residential dwellings and commercial businesses in the Silver Springs General Improvement District service area. The WRF uses an extended aeration (BioLac[®]) process, filtration and chlorination to achieve effluent standards.

The facility is designed to treat 0.600 million gallons per day (MGD) of domestic and commercial sewage.

WRF effluent is reused in conjunction with the Silver Springs Airport property and lessee Dayton Valley Turf for irrigation of alfalfa and turf grasses at the subject airport property. When treated effluent is not used for irrigation, the WRF discharges to the HDPE lined effluent storage basin located onsite. A truck fill facility at the WRF for the provision of treated effluent for construction water and dust control is also authorized subject to approval by NDEP.

The plant provides denitrified effluent (10 mg/L or less), of Class B effluent, NAC.445A.276 to ensure that there are no impacts to groundwater from nitrates. The agricultural reuse site is permitted under a separate permit (NEV99017).

To reduce any potential for impact, the Permittee performs quarterly sampling of the WRF effluent to ensure concentrations of the listed parameters meet the required effluent standards. The Permittee is also required to maintain records at the site which document the following:

- \$ if allowed, the number of loads of domestic sewage accepted at the site;
- \$ volume of sludge wasted to on-site sludge lagoon(s);
- \$ volume of sludge landfilled

These records are available for inspection by the Division at any time.

Tertiary Treatment Process:

Domestic sewage (raw wastewater) makes up the waste stream which is collected in an aerated primary storage lagoon before it is directed to the headworks area where influent sewage is screened, and grit and large particles are removed and collected for landfill disposal. Following the headworks, the waste stream is routed to an extended aeration basin where the BioLacJ activated sludge process treats the wastewater using biological nutrient removal. The wastestream is next passed through a clarifier and then a sand filter before disinfection in the chlorine contact basin.

The clarifier removes suspended solids in the wastestream from the extended aeration basin by gravity separation. Solids(sludge) removed from the aeration basin are discharged into the sludge lagoon(s). Filter backwash water is also directed to the lagoons. Some of the solids from the aeration basin are recycled back into the head of the aeration basin to maintain a given solids level.

Flow

Influent flows are measured by a MagMeter in a meter vault before the grit chamber. The permitted daily maximum flow has been set at 0.600 MGD, with the 30-day average flow at 0.499 MGD.

Receiving Water Characteristics

Depth to groundwater near the plant site is at 25 feet and is potable. A domestic water system serves Silver Springs and the water quality varies slightly from well to well.

Groundwater samples are collected and analyzed quarterly from two monitor wells for the presence of nitrates and chlorides and total dissolved solids.

Elevated levels of nitrate in the shallow groundwater are known to exist due to the use of individual septic disposal systems in the basin.

Procedures for Public Comment

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwaters of the State of Nevada subject to the conditions contained within the reuse permit, is being sent to the **Dayton Courier** and the **Nevada Appeal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination

The Division has made the tentative determination to renew (reissue) the permit for a five (5) year period.

Proposed Effluent Limitations, Schedule of Compliance

<u>PARAMETERS</u>	<u>DISCHARGE LIMITATIONS</u>		<u>MONITORING REQUIREMENTS</u>
	<u>30-day Ave.</u>	<u>Daily Max</u>	<u>Measurement Frequency</u>
FLOW:			
Influent:	Monitor & Report	Monitor & Report	Continuous
Effluent:	0.499 MGD	0.600 MGD	Continuous
BOD₅:			

Influent: Monitor & Report	Monitor & Report	Monthly
Effluent: 30 mg/L	45 mg/L	Monthly

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<u>PARAMETERS</u>	<u>DISCHARGE LIMITATIONS</u>	<u>MONITORING REQUIREMENTS</u>
	<u>30-day Ave.</u> <u>Daily Max</u>	<u>Measurement Frequency</u>

TSS:

Influent: Monitor & Report	Monitor & Report	Monthly
Effluent: 30 mg/L	45 mg/L	Monthly
Nitrogen as N: 10 mg/l	Monitor & Report	Monthly
pH: Between 6.0 and 9.0 SU		Monthly
Fecal Coliform: 2.2CFU/100 ml	23CFU/100 ml	Monthly

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M & R = Monitor and Report; MGD = million gallons per day; ml = milliliters; mg/L = milligrams per liter

Monitoring Well Sampling Requirements

| <u>MONITORING WELL #1(UP GRADIENT), #2(DOWN GRADIENT)</u> | <u>Monitoring Frequency</u> |
|---|-----------------------------|
| TOTAL DISSOLVED SOLIDS: Monitor and Report | Quarterly |
| NITRATE as N: See Part I.A.13, 10 mg/l | Quarterly |
| CHLORIDE: Monitor and Report | Quarterly |
| GROUNDWATER ELEVATION: Monitor and Report | Quarterly |

Schedule of Compliance, Special conditions:

1.Any revisions to the approved Operations and Maintenance Manual (O & M) shall be submitted no later than July 30, 2008.

Rationale for Permit Requirements

Effluent monitoring is required to assess the level of treatment being provided and to determine when design capacity is being approached.

Groundwater monitoring is required to ensure that operations of the facility do not degrade groundwaters of the State.

Prepared by: Icyl C. Mulligan
 April, 2008

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